



Local food environment and diet in children and young people

A systematic review found some evidence that the availability and accessibility of food outlets and the local availability and cost of specific foods affected diet in children and young people.

Overview: The term 'obesogenic environment' refers to the role environmental factors may play in determining both energy intake and expenditure. ([Government Office for Science 2007](#)). Environmental factors may act by determining the availability and consumption of different foods, the levels of physical activity undertaken by populations, or both.



The food environment can be described as the opportunities for people to obtain food. The concept of food environment can be broken down into 4 aspects ([Glanz et al. 2005](#)):

- The community food environment (for example, location and accessibility of food outlets)
- The consumer food environment (for example, price, promotion and placement of food choices)
- The organisational food environment (for example, access to food in settings other than home, such as workplaces and schools)
- The information food environment (for example, food marketing, media and advertising).

Previous studies have suggested that the local food environment can influence the likelihood of children being obese or overweight ([Osei-Assibey et al. 2012](#)).

Current advice: The 2011 government report [Healthy Lives, Healthy People: A Call to Action on Obesity in England](#) recommended that government, local government and 'key partners' (such as the food and drink industry) should change the environment to support individuals in making healthier choices to prevent weight gain.

NICE's public health guidance on [working with local communities to prevent overweight and obesity](#) states that local policy makers should consider the full range of factors that may influence weight, such as access to food and drinks that contribute to a healthy and balanced diet or opportunities to use more physically active modes of travel. Commissioners should aim to influence the wider determinants of health, including, for example, ensuring access to affordable, healthier food and drinks.

The NICE Pathways on [obesity](#) and [diet](#) bring together all related NICE guidance and associated products on the areas in interactive topic-based diagrams.

New evidence: A systematic review by [Engler-Stringer et al. \(2014\)](#) investigated how the community and consumer food environments affect diet among children and young people.

The review sought studies in children and young people aged less than 18 years that assessed the community food environment (for example, number or distance of food outlets from participants' homes) or the consumer food environment (for example, price and promotion of food in local food outlets). The outcomes of interest were any dietary measures, such as intake of healthy or unhealthy foods and quality of diet.

A total of 26 studies were identified, most of which were cross-sectional studies conducted in the USA, Canada or Europe. Overall, 22 of these 26 studies showed at least one association between the food environment and diet in children and young people.

A total of 16 studies (approximately 81,000 participants) assessed the availability and access of food outlets within 0.1 to 6 miles of children and young people's homes. Of the 15 studies considering availability of food outlets, 11 found that the presence, number and density of food outlets near home were associated with dietary outcomes. Only 5 of the 14 studies that assessed access to food outlets reported an association between distance of the nearest food outlet from home and diet. However, the direction of effect was not consistent; for example, 1 study found that high vegetable intake was associated with both living further from a fast food outlet and living further from a supermarket.

Among the 4 studies that assessed perceived food availability (approximately 31,000 participants), 3 found that perceived availability of food outlets was associated with diet.

The remaining 6 studies considered the consumer food environment: cost of local food (3 studies, approximately 64,000 participants) and availability of specific food groups in local outlets (3 studies, approximately 1800 participants). Cost of fast food appeared to be negatively associated with fast food consumption, and availability of specific food types, such as vegetables, in local outlets seemed to be linked with consumption.

This analysis is limited by the variation among the included studies, in how the community and consumer food environment was assessed and in the diet outcome measures used. In addition, studies selected for this review were assessed for inclusion by only 1 reviewer, and study quality and publication bias were not evaluated.

Commentary: "This high-quality review brings together the published evidence on the association between the community and consumer food environments and children's diets. This is a notoriously difficult field to measure, because there are significant challenges in assessing both diet and aspects of the environment. The findings – that the availability and accessibility of food outlets and the local cost and availability of specific foods affected diet in children and young people – are therefore of great importance. It seems likely that further methodological developments would only serve to strengthen these conclusions.

"We therefore do not need to wait to take action. There should be strong concerted actions to improve the availability of and access to healthy foods. People should not be bombarded with promotions for food loaded with sugar and fat, while fresh fruit and vegetables lie out of reach. Action should focus on all places where people have access to food, including workplaces, schools, cafes, restaurants, takeaways, and the retail environment. The aim should be to make the healthier choice the easy choice." – **Dr Nick Cavill, Independent Consultant, Cavill Associates Ltd and Research Associate, University of Oxford**

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